What is claimed is:

## 1. A compound which has the structure

$$\begin{array}{c|c}
R^{2b} & R^{2} \\
R^{2a} & R^{2a} \\
R^{2a} & R^{2$$

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wherein m is 0, 1 or 2; n is 0, 1 or 2;

Q is C or N

A is  $(CH_2)_x$  where x is 1 to 5 or A is  $(CH_2)_x^1$  where  $x^1$  is 1 to 5 with an alkenyl bond or an alkynyl bond embedded anywhere in the chain, or A is  $-(CH_2)_x^2-O-(CH_2)_x^3-$  where  $x^2$  is 0 to 5 and  $x^3$  is 0 to 5, provided that at least one of  $x^2$  and  $x^3$  is other than 0;

B is a bond or is  $(CH_2)_x$  where  $x^4$  is 1 to 5;

15 X is CH or N;

X, is C, N, O or S;

X, is C, N, O or S;

 $X_4$  is C, N, O or S;

 $X_s$  is C, N, O or S;  $X_\epsilon$  is C, N, O or S;

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provided that at least one of  $X_2$ ,  $X_3$ ,  $X_4$   $X_5$  and  $X_6$  is N; and at least one of  $X_2$ ,  $X_3$ ,  $X_4$   $X_5$  and  $X_6$  is C,

R' is H or alkyl;

25 R<sup>2</sup> is H, alkyl, alkoxy, halogen, amino or substituted amino or cyano;

 $R^{2a}$ ,  $R^{2b}$  and  $R^{2c}$  may be the same or different and are selected from H, alkyl, alkoxy, halogen, amino or substituted amino or cyano;

R<sup>3</sup> is selected from H, alkyl, arylalkyl, aryloxycarbonyl, alkyloxycarbonyl, alkynyloxycarbonyl, alkenyloxycarbonyl, arylcarbonyl, alkylcarbonyl, aryl, heteroaryl, cycloheteroalkyl, heteroarylcarbonyl,

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structure P(O)(OR4a);

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heteroaryl-heteroarylalkyl, alkylcarbonylamino,
    arylcarbonylamino, heteroarylcarbonylamino,
    alkoxycarbonylamino, aryloxycarbonylamino,
    heteroaryloxycarbonylamino, heteroaryl-
    heteroarylcarbonyl, alkylsulfonyl, alkenylsulfonyl,
    heteroaryloxycarbonyl, cycloheteroalkyloxycarbonyl,
    heteroarylalkyl, aminocarbonyl, substituted
    aminocarbonyl, alkylaminocarbonyl, arylaminocarbonyl,
    heteroarylalkenyl, cycloheteroalkyl-heteroarylalkyl;
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    hydroxyalkyl, alkoxy, alkoxyaryloxycarbonyl,
    arylalkyloxycarbonyl, alkylaryloxycarbonyl,
    arylheteroarylalkyl, arylalkylarylalkyl,
    aryloxyarylalkyl, haloalkoxyaryloxycarbonyl,
    alkoxycarbonylaryloxycarbonyl, aryloxyaryloxycarbonyl,
    arylsulfinylarylcarbonyl, arylthioarylcarbonyl,
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    alkoxycarbonylaryloxycarbonyl, arylalkenyloxycarbonyl,
    heteroaryloxyarylalkyl, aryloxyarylcarbonyl,
    aryloxyarylalkyloxycarbonyl, arylalkenyloxycarbonyl,
    arylalkylcarbonyl, aryloxyalkyloxycarbonyl,
    arylalkylsulfonyl, arylthiocarbonyl, arylalkenylsulfonyl,
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    heteroarylsulfonyl, arylsulfonyl, alkoxyarylalkyl,
    heteroarylalkoxycarbonyl, arylheteroarylalkyl,
    alkoxyarylcarbonyl, aryloxyheteroarylalkyl,
    heteroarylalkyloxyarylalkyl, arylarylalkyl,
    arylalkenylarylalkyl, arylalkoxyarylalkyl,
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    arylcarbonylarylalkyl, alkylaryloxyarylalkyl,
    arylalkoxycarbonylheteroarylalkyl, heteroarylarylalkyl,
    arylcarbonylheteroarylalkyl, heteroaryloxyarylalkyl,
    arylalkenylheteroarylalkyl, arylaminoarylalkyl,
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    aminocarbonylarylarylalkyl;
           Y is CO,R4 where R4 is H or alkyl, or a prodrug
    ester, or Y is a C-linked 1-tetrazole, a phosphinic acid
    of the structure P(O)(OR<sup>4a</sup>)R<sup>5</sup> where R<sup>4a</sup> is H or a prodrug
    ester, R<sup>5</sup> is alkyl or aryl, or a phosphonic acid of the
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 $(CH_2)_x$ ,  $(CH_2)_x^1$ ,  $(CH_2)_x^2$ ,  $(CH_2)_x^3$ ,  $(CH_2)_x^4$ ,  $(CH_2)_m$ , and  $(CH_2)_n$  may be optionally substituted with 1, 2 or 3 substituents;

including all stereoisomers thereof, prodrug

seters thereof, and pharmaceutically acceptable salts
thereof,

and specifically excluding the structure as shown below:

where  $X_2 = N$ ,  $X_3 = C$ ,  $X_4 = 0$  or S, Z = 0 or a bond

- 2. The compound as defined in Claim 1 wherein X is CH.
- 3. The compound as defined in Claim 1 wherein A is  $-(CH_2)x^2-O-$ .
  - 4. The compound as defined in Claim 1 wherein Q is C.
- 5. The compound as defined in Claim 1 wherein B is a 20 bond.
  - 6. The compound as defined in Claim 1 wherein

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- The compound as defined in Claim 1 wherein  $R^3$  is 5 arylalkyloxycarbonyl, arylheteroarylalkyl, aryloxyarylalkyl, arylalkyl, aryloxycarbonyl, haloaryloxycarbonyl, alkoxyaryloxycarbonyl, alkylaryloxycarbonyl, aryloxyaryloxycarbonyl, heteroaryloxyarylalkyl, heteroaryloxycarbonyl, aryloxyarylcarbonyl, 10 arylalkenyloxycarbonyl, cycloalkylaryloxycarbonyl, arylalkylarylcarbonyl, heteroaryl-heteroarylalkyl, cycloalkyloxyaryloxycarbonyl, heteroarylheteroarylcarbonyl, arylalkylsulfonyl, arylalkenylsulfonyl, alkoxyarylalkyl, arylthiocarbonyl, 15 cycloheteroalkylalkyloxycarbonyl, cycloheteroalkyloxycarbonyl, or polyhaloalkylaryloxy-
- 8. The compound as defined in Claim 1 which the 20 structure

carbonyl, which may be optionally substituted.

9. The compound as defined in Claim 1 which has the 25 structure

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$$R^{2a}$$
 $X_2$ 
 $X_4$ 
 $X_5$ 
 $R^1$ 
 $(CH_2)_x$ 
 $(CH_2)_m$ 
 $(CH_2)_m$ 
 $(CH_2)_m$ 

- 5 10. The compound as defined in Claim 9 wherein  $R^{2a}$ ,  $R^{2b}$  and  $R^{2c}$  are each H;  $R^1$  is alkyl,  $x^2$  is 1 to 3;  $R^2$  is H; m is 0 or  $(CH_2)_m$  is  $CH_2$  or CHOH or CH-alkyl, X is C,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$  and  $X_6$  represent a total of 1, 2 or 3 nitrogens,  $(CH_2)_n$  is a bond or  $CH_2$  and  $R^3$  is alkoxyaryloxycarbonyl.
  - 11. The compound as defined in Claim 10 wherein  $R^1$  is  $CH_3$  and  $R^3$  is methyloxyphenyloxycarbonyl.
- 12. The compound as defined in Claim 1 wherein

$$\begin{array}{c} X_{2} X_{6} \\ X_{4} X_{5} \end{array}$$
is
$$\begin{array}{c} X_{2} X_{6} \\ X_{4} X_{5} \end{array}$$

$$\begin{array}{c} X_{1} \\ X_{4} X_{5} \end{array}$$
and
$$\begin{array}{c} X_{1} \\ X_{4} X_{5} \end{array}$$

13. The compounds as defined in Claim 1 having the 20 structure

- 5 14. A pharmaceutical composition comprising a compound as defined in Claim 1 and a pharmaceutically acceptable carrier therefor.
- 15. A method for treating diabetes, Type 2 diabetes, and related diseases such as insulin resistance, hyperglycemia, hyperinsulinemia, elevated blood levels of fatty acids or glycerol, hyperlipidemia, obesity, hypertriglyceridemia, inflammation, Syndrome X, diabetic complications, dysmetabolic syndrome, atherosclerosis, and related diseases, which comprises administgering to a

patient in need of treatment a therapeutically effective amount of a compound as defined in Claim 1.

16. A method for treating early malignant lesions,
5 ductal carcinoma in situ of the breast, lobular carcinoma in situ of the breast, premalignant lesions, fibroadenoma of the breast, prostatic intraepithelial neoplasia (PIN), liposarcomas and various other epithelial tumors (including breast, prostate, colon, ovarian, gastric and lung), irritable bowel syndrome, Crohn's disease, gastric ulceritis, and osteoporosis and proliferative diseases such as psoriasis, which comprises administering to a patient in need of treatment a therapeutically effective amount of a compound as defined in Claim 1.

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- 17. A pharmaceutical combination comprising a compound as defined in Claim 1 and a lipid-lowering agent, a lipid modulating agent, an antidiabetic agent, an anti-obesity agent, an antihypertensive agent, a platelet aggregation inhibitor, and/or an antiosteoporosis agent.
- The combination as defined in Claim 17 wherein the antidiabetic agent is 1, 2, 3 or more of a biquanide, a sulfonyl urea, a glucosidase inhibitor, a PPARy agonist, 25 a PPAR  $\alpha/\gamma$  dual agonist, an SGLT2 inhibitor, a DP4 inhibitor, an aP2 inhibitor, an insulin sensitizer, a glucagon-like peptide-1 (GLP-1), insulin and/or a meglitinide, the anti-obesity agent is a beta 3 adrenergic agonist, a lipase inhibitor, a serotonin (and 30 dopamine) reuptake inhibitor, a thyroid receptor agonist, an aP2 inhibitor, a cannabinoid receptor-1 antagonist and/or an anorectic agent, the lipid lowering agent is an MTP inhibitor, an HMG CoA reductase inhibitor, a squalene synthetase inhibitor, a fibric acid derivative, an 35 upregulator of LDL receptor activity, a lipoxygenase inhibitor, a farnesoid receptor (FXR) agonist, a liver X receptor (LXR) agonist, a CETP inhibitor or an ACAT

inhibitor, the antihypertensive agent is an ACE inhibitor, angiotensin II receptor antagonist, NEP/ACE inhibitor, calcium channel blocker and/or  $\beta$ -adrenergic blocker.

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- 19. The combination as defined in Claim 18 wherein the antidiabetic agent is 1, 2, 3 or more of metformin, glyburide, glimepiride, glipyride, glipizide, chlorpropamide, gliclazide, acarbose, miglitarene, insulin Claim 18 wherein the antidiabetic agent is 2, 3 or more of metformin, glyburide, glipizide, chlorpropamide, gliclazide, acarbose, miglitarene, insulin Claim 18 wherein the antidiabetic agent is 2, 3 or more of metformin, glyburide, glipizide, chlorpropamide, gliclazide, acarbose, miglitarene, insulin Claim 18 wherein the antidiabetic agent is 1, 2, 3 or more of metformin, glyburide, glipizide, glipizide, chlorpropamide, gliclazide, acarbose, miglitarene, insulin Claim 18 wherein the antidiabetic agent is 1, 2, 3 or more of metformin, glyburide, glipizide, glipizide, chlorpropamide, gliclazide, acarbose, miglitarene, insulin Claim 18 wherein the antidiabetic agent is 1, 2, 3 or more of metformin, glyburide, glipizide, chlorpropamide, gliclazide, acarbose, miglitarene, insulin Claim 18 wherein the antidiabetic agent is 2, 3 or more of metformin, glyburide, glipizide, glipizide,
- pioglitazone, rosiglitazone, balaglitazone, insulin, Gl-262570, isaglitazone, JTT-501, NN-2344, L895645, YM-440, R-119702, AJ9677, repaglinide, nateglinide, KAD1129, AR-HO39242, GW-409544, KRP297, AZ-242, AC2993, LY315902, P32/98 and/or NVP-DPP-728A, the anti-obesity agent is
- orlistat, ATL-962, AJ9677, L750355, CP331648, sibutramine, topiramate, axokine, dexamphetamine, phentermine, phenylpropanolamine, rimonabant (SR-141716) and/or mazindol, the lipid lowering agent is pravastatin, lovastatin, simvastatin, atorvastatin, fluvastatin,
- itavastatin, visastatin, rosuvastatin, pitavastatin, fenofibrate, gemfibrozil, clofibrate, avasimibe, ezetimibe, TS-962, MD-700, cholestagel, niacin and/or LY295427, the antihypertensive agent is an ACE inhibitor which is captopril, fosinopril, enalapril, lisinopril,
- quinapril, benazepril, fentiapril, ramipril or moexipril; an NEP/ACE inhibitor which is omapatrilat, [S[(R\*,R\*)]hexahydro-6-[(2-mercapto-1-oxo-3-phenylpropyl)amino]-2,2dimethyl-7-oxo-1H-azepine-1-acetic acid (gemopatrilat) or CGS 30440;
- an angiotensin II receptor antagonist which is irbesartan, losartan, telmisartan or valsartan;

amlodipine besylate, prazosin HCl, verapamil, nifedipine, nadolol, propranolol, carvedilol, or clonidine HCl, the platelet aggregation inhibitor is aspirin, clopidogrel, ticlopidine, dipyridamole or ifetroban.